

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Camras School Mercury Spill - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

Subject: POLREP #2
Final
Camras School Mercury Spill

Chicago, IL
Latitude: 41.9353512 Longitude: -87.7704031

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Date: 4/22/2019
Reporting Period: 3/30/19-4/5/19/19

1. Introduction

1.1 Background

Site Number:	C5NU	Contract Number:
D.O. Number:		Action Memo Date:
Response Authority:	CERCLA	Response Type:
Response Lead:	PRP	Incident Category:
NPL Status:	Non NPL	Operable Unit:
Mobilization Date:	3/26/2019	Start Date:
Demob Date:	4/5/2019	Completion Date:
CERCLIS ID:		RCRIS ID:
ERNS No.:		State Notification:
FPN#:		Reimbursable Account #:

1.1.1 Incident Category

Emergency response

1.1.2 Site Description

On 3/26/19, students at Marvin Camras Elementary School in Chicago, IL were discovered playing with a bag of elemental mercury. The source of the mercury was tracked back to a barometer in a science room. Several hours elapsed between the time of the spill and the time that it was discovered by teachers. By the time it was discovered, the students had traveled throughout the school with the mercury and handled it in several rooms. It was reported that the students may have taken it outside to the playground area. The highly impacted areas include the classroom adjoining the location of the barometer (room 211), the cafeteria, and 318D. Additional classrooms with moderate impact include 213, 318C, and 309.

1.1.2.1 Location

The mercury was spilled at the Marvin Camras Elementary School. Camras Elementary is a Chicago Public School (CPS) and has students from kindergarten thru 8th grade. The school is located at 3000 N. Mango St., Chicago, IL. The school has three main floors and a basement.

1.1.2.2 Description of Threat

The spill occurred at an elementary school, with grades kindergarten through 8th grade. The school has approximately 900 students.

Upon initial inspection of room 211 on 3/27, visible mercury beads were present on the floor near the location of the barometer. The Chicago Fire Department conducted a limited cleanup of some spilled mercury beads at the school. CPS filed an NRC report on 3/26 and requested EPA assistance.

The spilled mercury presents a risk of release to the environment by tracking on shoes and other personal items within the school. It was also reported by the schools that the students may have taken the mercury out to the playground, outside of the school.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Upon initial inspection by EPA and START, visible mercury beads were seen on the ground in the room with the barometer. Elevated mercury vapor readings on the Lumex also documented the presence of an elemental mercury spill within the school. An estimated 4-5 tablespoons of mercury were spilled.

EPA utilized the Lumex to conduct a screening of the school to determine the extent of contamination. During the initial inspection, EPA found several areas with elevated levels of mercury. The highly impacted areas include the classroom adjoining the location of the barometer (room 211), the cafeteria, and 318D. Additional classrooms with moderate impact include 213, 318C, and 309.

Initial screening of student personal items showed elevated mercury vapor readings. Several personal items were collected for heating and venting. From the data collected from the personal item screening, CDPH and EPA visited the homes of students who had taken those personal items home. EPA conducted screenings at those residences and additional personal items were taken, however no residential properties showed mercury vapor concentrations in the breathing zones that would require a residential clean up.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

2.1.2 Response Actions to Date

Response actions from prior to 3/30/19 can be found in POLREP 1.

3/30/19:

On 3/30/19, EPA continued screening activities at the school to support CPS's cleanup at the school. The playground assessment was delayed on 3/30/19 because of cold weather and snow from the previous night. The screening was focused on lockers, rooms being cleaned by CPS's contractor, and in rooms that hadn't been screened during the initial preliminary assessment due to proximity to the hot zone. EPA also began screening laptop carts of students' laptops that they reportedly used after handling the mercury. EPA received two additional Lumexes from EPA's Emergency Response Team (ERT) to prepare for conducting multiple clearance screenings at once.

Cleanup work continued in the various impacted areas of the school by CPS's contractor. Work on the second floor continued, including in room 211. CPS's contractor also began cleaning rooms on the 3rd floor, including the classrooms and the cafeteria.

3/31/19:

On 3/31/19, EPA continued locker screenings throughout the building including lockers that had been previously blocked by debris and/or equipment in the hallway. EPA also continued to provide screening support in rooms as CPS's contractor worked to ensure that all hot spots were being identified and could be addressed prior to clearance screening.

EPA participated in a phone call to discuss clearance screening procedures with ATSDR and CDPH. CDPH, with ATSDR consultation, had previously determined that all clearance screenings would be conducted by EPA using a Lumex in a child's breathing space (0-3'). Since several areas of the school had been impacted in varying degrees, EPA wanted to clarify which rooms should receive full 8 hour TWAs clearances on the Lumex. It was determined that any room that had been heavily impacted (ex. required an elemental mercury cleanup or were adjoining one that did) would receive a full 8 hour TWA on the Lumex. These 8 hour TWAs would be run in rooms 211, 213A, 213, the hallway outside of classrooms 211/213, 318D, the cafeteria, and the gym (the gym was not impacted but was used as a staging area for waste). The March 2019 EPA National Elemental Mercury Response Guidebook (Appendix B) presented another option for areas that were less impacted. This method included averaging discrete readings over an 8 hour time period (ex. 1 reading per hour). It was determined that this method would be utilized in less impacted rooms including 309, 311, 318C, the hallway outside 318C/318D, the hallway outside 309/311, and the front entrance (not impacted but used as PPE dress out area). It was also determined that the rest of the school would be screened again as a precautionary measure to ensure that no areas had been missed and no cross-contamination had occurred. This approach was supported by ATSDR and CDPH.

On 3/31/19, CPS made the decision to dispose of any items that had been bagged up from the impacted classrooms rather than re-screening all of them and putting them back into the classroom. They determined that this was the best financial and protective measure. CPS also decided to dispose of all rugs in the building to ensure protection of public health. CPS also discarded many of the items in the kitchen, including bake ware, to ensure protection of the students' health without screening those items.

Waste shipping could not begin on 3/31 as expected so the floor of the gym was covered in poly as a staging area. CPS's contractor began staging items for disposal in the gym so that work and clearance screening could progress in the rest of the building.

4/1/19:

Cleanup work continued at the school on 4/1/19. Several areas in the school went thru heat/vent cycle(s), after vacuuming and/or wash cycle(s) had been completed. Other rooms had washes conducted. CPS's contractors worked on several impacted sink drains identified previously- including in the cafeteria and in 213A. One trap for an impacted sink in the cafeteria could only be accessed in the ceiling of the gym below (approximately 30' above the ground). CPS hired a scaffolding company to build a scaffold in the gym in order for the trap to be removed and replaced.

Based on newer anecdotal information, EPA conducted additional screening of 8th graders prior to the beginning of school. CDPH spoke with the 8th grade classes to ensure that all students that should have been screened, were. An additional 39 students had items and shoes screened that day. One additional student was identified for a home visit the following day.

Due to the progression of work and removal of waste from the building, EPA was able to begin conducting clearance sampling in areas of the school building. Clearance screening began overnight into 4/2/19.

4/2/19:

Cleanup work continued on 4/2/19. CPS's contractor began shipping waste on 4/2. EPA continued clearance sampling activities in rooms where cleanup had been completed. The final clearance sampling was completed in the vast majority

of the school, aside from the cafeteria where work continued (and the gym which still contained waste). All 8 hour clearance samples on 4/2 were below CDPH's established clearance level of 1,000 ng/m³. In addition, EPA continued screening areas of the school that were not previously accessible and screening as CPS's contractor continued cleaning.

One additional home visit was conducted on 4/2. No elevated readings were detected and no additional personal items were taken.

Late on the evening of 4/2/19, CPS contractors were addressing two mechanical closets that had elevated readings of mercury that may have been related to CFL bulbs rather than the 3/26 mercury spill. CPS contractors utilized a standard shop vacuum to clean up the ground. This caused elevated mercury readings in the hallways and classrooms that had previously been cleared. EPA and START opened windows in the affected rooms to assist with the venting process in those rooms and EPA continually monitored the situation and conducted monitoring overnight. Ambient air readings declined as air circulated into the building. The area was also vented with a negative air unit.

4/3/19:

On the morning of 4/3/19, EPA, CDPH, CPS and their contractors met and evaluated what happened the evening before when CPS's contractor was cleaning the mechanical closets. This investigation included looking above the ceiling tiles and at an old, unused, HVAC system to determine how the vapors had spread into other classrooms. It was shown that there was a gap between the walls and the roof in some areas, which is likely how the vapors traveled into the classrooms. No additional cleanup was required outside of the mechanical closets due to the incident, just heating and venting of the area. CPS decided to epoxy the floors in the mechanical closets.

On the morning of 4/3, EPA, ATSDR, and CDPH held a call to discuss the current status of mercury vapor readings in the building and to determine a path forward with clearance sampling of areas that had been previously cleared after cleanup work was completed in those rooms. Since several 8 hour clearance screenings had already been collected and were below the clearance level, it was determined that these rooms should be checked again out of an abundance of caution. It was determined that the 8 hour TWA discrete sampling would be conducted in these rooms. Additionally, a third sweep of the entire building would be conducted to ensure that no elevated readings were found elsewhere. Additionally, an 8 hour continuous TWA sample would be collected in the hallway outside of the mechanical closet on the 3rd floor.

4/4/19:

On Thursday 4/4, there were limited cleanup operations left to be conducted at the site by CPS's contractor. Their work focused mainly on getting the last of the waste off of the property and addressing any remaining areas with elevated mercury readings identified by EPA's building screenings. CPS's contractor applied epoxy in a few additional areas of the school.

EPA's operations focused mainly on conducting the remaining final screening at the school, as discussed with ATSDR and CDPH on 4/3. EPA conducted a final building sweep including remaining classrooms, hallways, stairwells, and vestibules. Since cleanup in the cafeteria was completed, EPA conducted the final clearance sampling in the cafeteria on 4/4. All 8 hour clearance screenings were below CDPH's clearance level of 1,000 ng/m³.

During the afternoon, the CEO of CPS, Janice Jackson, visited the school to get an update on the cleanup. She met with EPA, CDPH, and CPS staff. EPA provided a status update and information on mercury cleanups.

Overnight into 4/5, EPA conducted the clearance screening in the gym since the last of the waste left site on 4/4. EPA also conducted additional discrete reading clearance screenings overnight.

4/5/19:

Overnight into 4/5/19, the final clearance screenings were conducted. All 8 hour TWAs were below the established CDPH screening level of 1,000 ng/m³ in a child's breathing space (0'-3'). Results were passed along to and discussed with CDPH and CPS. During a conference call on 4/5 with CPS and CDPH, it was determined that the school would re-open on the following Monday, 4/8/19.

Following the conference call, EPA began demobilization from the site. At the request of CPS, EPA also attended a parent meeting at the school on 4/9/19 to answer technical questions related to the response.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

The spill occurred at a Chicago Public School. CPS has hired a contractor to conduct mercury remediation at the school.

2.1.4 Progress Metrics

All disposal was conducted by CPS's contractor. It has been reported that 12 roll offs were sent for disposal. Full disposal metrics from CPS aren't available yet.

Regional Metrics

Miles of river systems cleaned and/or restored	N/A
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This is an Integrated River Assessment. The numbers should overlap.

Cubic yards of contaminated sediments removed and/or capped	N/A
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Gallons of oil/water recovered	N/A
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Acres of soil/sediment cleaned up in floodplains and riverbanks	N/A
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Stand Alone Assessment

Number of contaminated residential yards cleaned up	N/A
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Contaminant(s) of Concern

Number of workers on site	30
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Oil Response Tracking

Mercury

Estimated volume	Initial amount released Final amount collected FPN Ceiling Amount	4-5 Tablespoons 4 Tablespoons (estimated) N/A
CANAPS Info	FPN Number Body of Water affected	N/A N/A
Administrative and Logistical Factors (Place X where applicable)		
Precedent-Setting HQ Consultations (e.g., fracking, asbestos)	X Community challenges or high involvement Endangered Species Act / Essential Fish Habitat issues	Radiological Explosives
More than one PRP	Historic preservation issues NPL site	X Residential impacts Relocation
AOC	Remote location	Drinking water impacted
UAO	Extreme weather or abnormal field season	Environmental justice
DOJ involved	Congressional involvement	High media interest
Tribal consultation or coordination or other issues	Statutory Exemption for 1 Year	Active fire present
Statutory Exemption for \$2 Million	Incident or Unified Command established	Actual air release (not threatened)
X Hazmat Entry Conducted – Level A, B or C		
Green Metrics		
Metric	Amount	Units
Diesel Fuel Used	N/A	gallons
Unleaded Fuel Used	N/A	gallons
Alternative/E-85 Fuel Used	N/A	gallons
Electricity from electric company	N/A	kWh
Electric Company Name and Account #	N/A	
Electricity from sources other than the electric company	N/A	kWh
Solid waste reused	N/A	
Solid waste recycled	N/A	
Water Used	N/A	gallons
Version 160317		

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

EPA demobilized from the site on 4/5/19.

2.2.1.2 Next Steps

N/A

2.2.2 Issues

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining



* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

2.5.1 Safety Officer

OSCs are serving this role

2.5.2 Liaison Officer

OSCs are serving this role.

2.5.3 Information Officer

The EPA Region 5 public affairs office has been supporting press support

3. Participating Entities

3.1 Unified Command

3.2 Cooperating Agencies

Chicago Department of Public Health (CDPH)
Chicago Public Schools (CPS)
Chicago Fire Department (CFD)
Agency for Toxic Substances and Disease Registry (ATSDR)

4. Personnel On Site

EPA: 1-3
START: 2-6
CDPH: 1-2
CPS and contractors: multiple

5. Definition of Terms

ATSDR Agency for Toxic Substances and Disease Registry
CDPH Chicago Department of Public Health
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act
CFD Chicago Fire Department
CPS Chicago Public Schools
EPA Environmental Protection Agency
NRC National Response Center
OSC On-Scene Coordinator
PRP Potentially Responsible Party
START Superfund Technical Assessment & Response Team Contractor

6. Additional sources of information

6.1 Internet location of additional information/report

6.2 Reporting Schedule

This is the final POLREP

7. Situational Reference Materials

No information available at this time.